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ABSTRACT

This annual report describes the following activities of the Maryland State Council on Vocational-Technical Education: (1) mandated responsibilities; (2) integration of academic and vocational education; (3) workplace requirements; (4) serving special populations; (5) technology education; (6) image/public relations/communications; (7) career and technology teacher preparation; (8) resources for vocational-technical education; and (9) advocacy for career and technology education and liaison with related organizations. Several major recommendations are reported: (1) improve the image of vocational-technical education; (2) ensure that public higher education responds to state needs, particularly for career and technology teacher preparation; (3) strengthen technology in higher education; (4) strengthen faculty professional development for technology education; (5) improve resources for vocational-technical education; and (6) improve services by improving interagency communications. A matrix of concerns and recommendations is included, as well as 10 references. (NLA)

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STRANDS OF OPPORTUNITY, WEBS OF HOPE: WEAVING A SEAMLESS EDUCATION SYSTEM FOR WORKPLACE NEEDS

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1991

ANNUAL REPORT

Maryland State Council on
Vocational-Technical Education
45 Calvert Street - Lower Level
Annapolis, MD 21401

CE 061709

MARYLAND STATE COUNCIL ON VOCATIONAL-TECHNICAL EDUCATION

BEST COPY AVAILABLE

The State Council on Vocational-Technical Education is required under Title 21, Section 21-104 of the Annotated Code of Maryland to publish and distribute an annual report addressing all significant activities of the Council during the year covered by the report.

Information presented in this report relates to Council activities undertaken in 1991.

TABLE OF CONTENTS

	PAGE
Introduction	1
Council Purpose	3
Council Philosophy on Vocational-Technical Education	3
Council Organization	4
Council Assumptions	5
Council Initiatives	6
Council Activities	7
1. Activities Related to Mandated Responsibilities	8
2. Activities Related to Integration of Academic and Vocational Education	9
3. Activities Related to Requirements of the Workplace	9
4. Activities Related to Serving Special Populations	9
5. Activities Related to Technology Education	10
6. Activities Related to Image/Public Relations/ Communications	10
7. Activities Related to Career and Technology Teacher Preparation	11
8. Activities Related to Resources for Vocational-Technical Education	11
9. Activities Related to Advocacy for Career and Technology Education and Liaison with Related Organizations	12
Council Recommendations	12
1. Improve the Image of Vocational Education	12
2. Assure that Public Higher Education responds to State Needs, particularly for Career and Technology Teacher Preparation	14
3. Strengthen Technology in Higher Education	15
4. Strengthen Faculty Professional Development for Technology Education	16
5. Improve Resources for Vocational-Technical Education	17
6. Improve Services by Improving Inter-agency Communications	18
Matrix of Council Concerns and Recommendations	19
References	22

STRANDS OF OPPORTUNITY, WEBS OF HOPE:

WEAVING A SEAMLESS EDUCATION SYSTEM FOR WORKPLACE NEEDS

1991 ANNUAL REPORT OF THE STATE COUNCIL ON VOCATIONAL-TECHNICAL EDUCATION

INTRODUCTION

"We must restructure and reorganize vocational education to make it equal to other types of education."

With this charge to vocational-technical education in his annual State of the State Address, Maryland Governor William Donald Schaefer concluded 1991 by laying the groundwork for major future changes. In 1991, more than ever before, the need to strengthen career and technology education and extend it to more of Maryland's population was made excruciatingly clear.

Governor Schaefer's call to action came at the end of a year of great economic difficulty for Maryland. Many considered 1991 to be the worst recessionary year in recent history. Paralleling the nation, unemployment swelled at the same time that economic leaders pointed to an insufficiently technically trained and competitive workforce as the source of the economic downturn. **In a year of serious problems, vocational-technical education emerged as one of the solutions,** with its ability to lead individuals to good careers and businesses to productivity.

The need to revitalize vocational-technical education continued to be underscored by the national deluge of education reports decrying the lack of student skills, failure of educational institutions, and poor student preparation for the workplace. After close to a decade of condemnation of public education, these reports continued through 1991. **The strengths of vocational-technical education were often overlooked as the furor over school problems in general continued. But ironically, many of the solutions proposed in the reports are already present in our Maryland career and technology programs -- if only they might be enhanced and reach more students.**

Environmental sources of distress for children, seriously impeding their educational performance, were poignantly described in reports such as Investing In Our Children (Committee for Economic Development, 1985) and Beyond Rhetoric: A New American Agenda for Children and Families (National Commission on Children, 1991). For example, Lagging Behind (U.S. Department of Education, 1986) presented data showing that teenagers living in poverty were four times more likely to have below average basic skills than teenagers who were not poor. **The reports were clear that support for change would need to go beyond the schools. The pressures students face outside the classroom as a result of poverty and families under stress require community leadership and cooperation among social and educational agencies.**

Reports such as A Nation at Risk (Gardner, et al., 1983), Workforce 2000 (Johnston and Packer, 1987), and America's Choice: High Skills or Low Wages (Commission on the Skills of the American Workforce, 1990) probed the relationship of student and school performance with the United States' economic status. **These reports recommended closer ties of the school curriculum with the needs of the workplace, higher academic standards, and more systematic investment in education.** Proposals ranged from establishing tests of skills related to workplace success, to a complete overhaul of public education.

Changes in the American workplace were viewed as requiring changes in education. Several of the reports pointed out that as technological progress advances, worker skills, knowledge, and ability to solve problems must correspondingly increase. America's Choice: High Skills or Low Wages predicted that "more than 70 percent of the jobs in America will not require a college education by the year 2000. These jobs are the backbone of our economy, and the productivity of our workers will make or break our economy." But these jobs will be far different from the relatively unskilled work undertaken by front-line workers in the past. Indeed, the Hudson Institute, in Workforce 2000 (1987) predicted that within ten years, new jobs would require workers whose median level of education would include at least a year and-a-half of college education. **Clearly, education must give students sound preparation both in academics, preparing them for further study if they choose, and in vocational-technical skills for the workplace.**

But much remains to be done to make these goals a reality. National data as well as the experience of many individuals and employers show that large numbers of youth who could be trained and educated for changing requirements of the workforce are underemployed or disengaged. The Southern Regional Education Board has observed that **"Most of our teenagers attend high schools designed for an economy that no longer exists. In the old days, all we needed were schools that educated a few individuals well, so they could manage and direct the activities of many others with marginal educations. Today's workplace does not operate that way".**

Here in Maryland, the 1991 Maryland School Performance Report indicated that only 59.60 percent of high school graduates Statewide met the requirements of the University of Maryland System, an approved occupational education program, or both. 40.40 percent of high school graduates left unprepared for either work or college. A number of students never make it to graduation, and the poor attendance of many who do shows their overall lack of interest in the curriculum. After leaving school, many students fail to find work, and many others become underemployed.

In response to this situation, in 1991, the Maryland State Board of Education took a bold step, proposing elimination of the "general track" of study in favor of requiring that all students prepare for college, entry into an occupation, or both. Career and technology programs have long been known for their ability to improve attendance for students disinter-

ested in other coursework. The State Board of Education's decision is an important beginning, setting forth the need to strengthen and expand career and technology programs as they prepare to serve more students.

The promising new Carl D. Perkins Vocational and Applied Technology Act of 1990 (P.L. 101-392) addresses our national education and workforce problems head-on, stating as its purpose, **"To make the United States more competitive in the world economy by developing more fully the academic and occupational skills of all segments of the population. This purpose will principally be achieved through concentrating resources on improving educational programs leading to academic, occupational, training, and retraining skill competencies needed to work in a technologically advanced society."**

The Maryland State Council on Vocational-Technical Education shares this vision of education and is fully committed to realizing the promise. We cannot, as some would prefer, reduce our vocational-technical education programs to a level of rote "labor training" that precludes academic skills and advanced technical work and leaves our students with few life options. But only at economic peril can we pretend that a liberal arts college degree is the answer for all students. **We must move forward aggressively to serve the citizens, employers, and most importantly, the students, with a full, enriching program for gainful employment as well as further study.**

COUNCIL PURPOSE

To advise and make recommendations on issues and policies to strengthen vocational-technical education, and to infuse the views of business, industry, agriculture, labor, education, and the general public into the decision making process for the development and promotion of vocational-technical education.

COUNCIL PHILOSOPHY ON VOCATIONAL-TECHNICAL EDUCATION

The State Council on Vocational-Technical Education defines vocational-technical education in the following manner:

> **VOCATIONAL-TECHNICAL EDUCATION IS THE TEACHING OF SKILLS AND THE DEVELOPMENT OF ATTITUDES REQUIRED FOR EMPLOYMENT AND FOR ADVANCEMENT IN WORK AND EDUCATION IN A CHANGING SOCIETY.**

This definition is the basis of the Council's philosophy on vocational-technical education.

Vocational-technical education is an integral part of the educational process and a lifelong process. It is a variety of learning experiences: academic, affective, and occupational. Students of all ages are involved in vocational-technical education in many settings: in the classroom, when they join the workforce, as they subsequently advance in their work, and as

they retrain for new or more sophisticated employment in a constantly changing technology oriented society. Vocational-technical education promotes excellence and all individuals should have equal access to quality vocational-technical education in accordance with their interests, needs, and abilities.

COUNCIL ORGANIZATION
1991-1992

Chairman — George E. Lechlider

Vice-Chair — Dr. Sheila Tolliver

Executive Committee
- George E. Lechlider, Chair
- Dr. Sheila Tolliver, Vice Chair
- Robert W. Cook
- Dr. Donald Maley
- Margit Meissner

Other Committees

State Plan and Evaluation Committee
- Sheila Tolliver - Chair
- Dr. Donald Maley
- Margit Meissner
- Larry Vinck
- Faye Williams

LAC Regional Meeting Committee
- Phyllis E. Reed, Chair
- Karen Bugg
- Dr. Donald Maley

Projects Committee

Work Group on Publicity/Community Colleges
- Dr. Thelma T. Daley
- Larry Vinck

Work Group on Integration
- Dr. Sheila Tolliver, Chair
- Karen Bugg
- Dr. Donald Maley
- Margit Meissner
- Faye Williams

Work Group on Technology
Dr. Donald Maley, Chair
Dr. Thelma T. Daley

Work Group on Special Populations
Margit Meissner, Chair
Dr. Thelma T. Daley
George E. Lechlider

(Resource Members)
Charlotte Conaway
Dr. Theodore Rybka

Special Committee on Funding
Dr. Sheila Tolliver, Chair
Robert W. Cook
George E. Lechlider
James H. McLean, Jr.

(Resource Members)
Delegate Joan Cadden
James Callahan
Herbert Fincher
Delegate Henry Heller
Nicholas Hobar
Dr. Eugene Karol
Joan Maynard
Katharine M. Oliver
Senator Lewis R. Riley
John Sprague
Dr. Edmonia T. Yates

COUNCIL ASSUMPTIONS

The Council has set forth an ambitious plan of action to attain its vision for vocational-technical education. As part of its vision, the State Council on Vocational-Technical Education has established certain assumptions, or principles for strengthening vocational-technical education.

1. Equity for vocational-technical education students, teachers, administrators, and schools is an essential component of all education policies and practices.

2. All students can be served by vocational-technical education and the opportunities, many non-traditional, which it provides.

3. Vocational-technical education must be closely linked with requirements of the work-place.

4. Employers must be involved in the school or community college vocational-technical education program.

5. High standards for student performance are essential for vocational-technical education.

6. The image of vocational-technical education must be improved, and its positive aspects promulgated among students, parents, teachers, counselors, administrators, and employers.

7. Integration of academic and vocational education is an essential component of education.

8. Vocational-technical education must provide students at all levels with a foundation for further study.

9. Students of all ages must become familiar with technology, and technology education should be stressed throughout the curriculum.

10. Vocational-technical education must be adequately funded, with resources including high quality faculty, state-of-the-workplace equipment, tools and supplies, and equitable access to other school system resources.

11. Strong career and technology teacher preparation programs and professional development opportunities are critical for strong vocational-technical education.

12. Quality vocational-technical education requires cooperative support from the community, including other educational and social service agencies.

COUNCIL INITIATIVES

The Annotated Code of Maryland and the Carl D. Perkins Vocational and Applied Technology Act of 1990 require the council to fulfill the following responsibilities.

1. **Advise the State Board on:**

   - **Development of the State Plan for Vocational-Technical Education**
   - **Adequacy of the State Plan**
   - **Establishment of Evaluation Criteria and Technical Committees**
   - **Conduct of Vocational-Technical Programs**
   - **Adequacy of Implementation of the State Plan.**

2. **Evaluate Vocational-Technical Education Delivery Systems Assisted Under Federal Acts.**

3. **Hold annual Public Meeting.**

4. **Advise and Report on Policies and Initiatives to Improve Vocational-Technical Education to the Governor, State Board, and Others.**

5. **Analyze and Report on Funding for Vocational-Technical Education.**

6. **Analyze and Review Corrections Education.**

7. **Recommend Incentives for Joint Planning/Collaboration between Vocational Education and Job Training.**

To conduct these activities objectively, a State council must be able to "carry out its evaluation functions, independent of programmatic and administrative control by other State boards, agencies, and individuals" (Section 112(e), Carl D. Perkins Vocational and Applied Technology Education Act of 1990).

In addition to its mandated initiates, the State Council has an extensive plan of additional strategic initiatives. Strategic initiatives for 1991 were:

I. **Integration of Academic and Vocational Education**

II. **Requirements of the Workplace**

III. **Special Populations**

IV. **Technology Education**

V. **Image/Public Relations/Communications**

VI. **Career and Technology Teacher Preparation**

VII. **Resources for Career and Technology Education.**

Strategic initiatives are described in further detail in the **Council Activities** section of this report.

COUNCIL ACTIVITIES

The principal work of the Council is carried out by its committees. The committees met as frequently as one or two times a month, depending on the urgency of work being performed. Council members voluntarily contributed a total of 200 days of work at committee meetings in addition to participating in the monthly Council meeting. Some of the more significant activities of the Council during the period covered by this report are summarized below.

1. **Activities Related to Mandated Responsibilities.**

a. Participated with State Joint Planning Committee in developing the State Plan for Vocational-Technical Education, FY1992-1994.

b. Reviewed legislation developed by the U.S. Senate and House of Representatives on higher education, school-to-work transition, and JTPA Amendments.

c. Commented to the U.S. Department of Education on proposed regulations for implementation of the Carl D. Perkins Vocational and Applied Technology Education Act of 1990.

d. Testified at State Board of Education Public Meeting on FY1992-1994 State Plan for Career and Technology Education.

e. Commented on the FY1992-1994 State Plan for Career and Technology Education to Education Secretary Lamar Alexander.

f. Testified to State Board of Education on proposed new graduation requirements.

g. Commented on the distribution of federal financial assistance furnished to the State under the Carl D. Perkins Vocational and Applied Technology Act of 1990.

h. Reviewed Maryland State Board for Community Colleges, "1990 Program Evaluations, Maryland Community Colleges".

i. Developed evaluation criteria and an evaluation plan for the next biennial evaluation report.

j. Participated in four meetings of the State Board of Vocational-Technical Education.

k. Held a public meeting on vocational-technical education issues.

l. Wrote a grant proposal for the International Division, Maryland Sisters Program for a foreign exchange program with Kanagawa, Japan for vocational-technical education administrators.

m. Hosted a reception and part of an introductory tour of Maryland career and technology education for visiting educators from Kanagawa.

2. **Activities Related to Integration of Academic and Vocational Education.**

   a. Established integration of academic and vocational education as a major priority for the biennial evaluation and drafted an evaluation survey to determine the nature and extent of current practices.

   b. Initiated a successful effort for federal legislation to include integration of academic and vocational education as a requirement of a new teacher education title (Title V of the House Higher Education Bill. Authorization: $400 million).

   c. Co-sponsored a conference on integration of academic and vocational education at the University of Maryland College Park.

   d. Addressed integration of academic and vocational education in six regional Local Advisory Council meetings for employers and educators.

3. **Activities Related to Requirements of the Workplace.**

   a. Conducted a series of six regional meetings in 1991 to provide technical assistance to local advisory councils related to their role in supporting local boards of education and institutions of postsecondary education.

   b. Sponsored an annual Statewide meeting for representatives of Local Advisory Councils on Vocational-Technical Education.

   c. Held a workshop to assist Local Advisory Council and Program/Craft Committee members and educators in improving linkages between business and education through better communication and better understanding of their roles.

   d. Supported the State Board of Education's proposed new requirement that all approved career and technology programs have active program/craft advisory committees.

   e. Reviewed longitudinal apprenticeship program information.

4. **Activities Related to Serving Special Populations.**

   a. Reviewed recommendations on how to serve special populations made by State councils on vocational education in other states.

b. Provided the impetus for a survey of services provided for postsecondary students with special needs which was conducted by Maryland Community College Student Services Deans.

c. Coordinated a presentation of services provided for special populations at the postsecondary level, including a county-based program involving liaison with businesses.

5. Activities Related to Technology Education.

a. Recommended to the State Board of Education that all high school graduates complete one credit of technology education.

b. Consulted with the University of Maryland College Park Engineering Department and others concerning technology education.

c. Made a presentation on technology education to the Senate Committee on Economic and Environmental Affairs.

d. Testified to the Maryland Higher Education Commission Task Force on Engineering Education.

6. Activities Related to Image/Public Relations/Communications.

a. Arranged for a Governor's Proclamation on Career and Technology Education Week.

b. Recommended a comprehensive program to make middle school students, educators, and parents aware of strengths and opportunities provided by career and technology education.

c. Arranged for several members of the Governor's staff, General Assembly, State Board of Education, State legislative staff, and federal congressional staff to receive briefings on State career and technology education programs.

d. Developed and distributed the following items related to the Council and vocational-technical education:

- Council newsletters
- Issue Paper, "Most High School Students are Served Scholastic Junk Food", by Southern Regional Education Board

- Testimony to the University of Maryland College Park on Career and Technology Teacher Preparation
- Testimony to Maryland Higher Education Commission Task Force on Engineering Education
- Issues in Vocational Education by Michael R. Morton, Council Executive Director

e. Hosted a legislative breakfast attended by 65 people to discuss State legislation on career and technology education with key members of the General Assembly. Participants were guests of Council members.

f. Continued the Council's Annual Vocational-Technical Education Awards Program which recognized two outstanding secondary vocational-technical education teachers, one outstanding community college occupational instructor, two model secondary schools, and three excellent community college programs.

7. Activities Related to Career and Technology Teacher Preparation.

a. Evaluated data projecting future needs for career and technology teachers.

b. Met with officials of the University of Maryland College Park concerning the recommendation to seriously downsize and possibly eliminate the Department of Industrial, Technological & Occupational Education (EDIT), which serves as almost the sole source of career and technology teachers in the State.

c. Provided testimony to the College Park Campus concerning the recommendation.

d. Explored national models for preparation of career and technology teachers with the National Center for Research in Vocational Education.

8. Activities Related to Resources for Vocational-Technical Education.

a. Established a task force consisting of legislators, business leaders, and representatives of education to recommend ways of enhancing resources for vocational-technical education.

b. Reviewed and analyzed information pertaining to how set-aside funds have been used by counties to strengthen career and technology education and provide opportunities for students.

c. Provided preliminary testimony to the appropriate legislative committee concerning the Council's plan to introduce legislation increasing the set-aside share of basic current expense aid.

d. Drafted and proposed legislation increasing the vocational-technical education set-aside of basic current expense aid. The proposed legislation was subsequently withdrawn for further review after the 1991 session of the General Assembly.

9. **Activities Related to Advocacy for Career and Technology Education and Liaison with Related Organizations.**

In addition to this program of activities, the Council maintained an active profile and participated in meetings of numerous State and national organizations involved with career and technology education, workforce preparation, and related issues.

COUNCIL RECOMMENDATIONS

In conducting all of the above activities, the Council garnered many observations about how to strengthen vocational-technical education in Maryland. Several major topics emerged. The recommendations are as follows.

1. Improve the Image of Vocational-Technical Education

Concern: Career and technology students, schools, and programs too often suffer "second class" status.

The goal of the Maryland School Performance Program stating that students must be prepared for entry into employment, college, or both at graduation points to the need for greater public awareness of the opportunities provided by career and technology education.

It also points to the need for greater respect for career and technology education as an option for students.

Recommendations:

A) **To the State Department of Education and Local School Systems:**

The State Department of Education, as well as local school systems, must spearhead a high profile campaign to see that positive information about vocational-technical education opportunities is provided to the general public; and in particular, to middle school students, parents, and educators.

New graduation requirements resulting in students' making earlier choices about pursuing career and technology and/or college preparation underscore the importance of more information about options.

For most students, middle school is a key decision period for selecting career patterns typically lasting well into adulthood. Middle school is often a turning point at which a student begins taking steps which will lead to productive employment, or loses direction.

Guidance counselors, teachers, administrators, and families need to become more familiar with vocational-technical education opportunities, including Tech Prep, and to present them in a positive light.

B) To the State Department of Education, Maryland Higher Education Commission, the Workforce Investment Board, and Local School Systems:

The Students' Bill of Rights for Vocational-Technical Education Students set forth by the Vocational Industrial Clubs of America should be embraced as an unqualified standard for vocational-technical education programs, and should be endorsed and adopted by agencies and organizations involved with planning and funding of career and technology education.

VOCATIONAL INDUSTRIAL STUDENT CLUBS OF AMERICA
STUDENTS' BILL OF RIGHTS

I. To be respected for our occupational and educational choices.

II. To meet occupational standards set by employers and to be proficient in the work-place basics.

III. To receive a world-class academic education.

IV. To earn credentials and degrees which qualify us for further education and work.

V. To receive career guidance that fits our interests and aptitudes, and allows for freedom of choice.

VI. To work in the occupations for which we have trained.

VII. To study in safe and stimulating schools.

VIII. To serve our communities.

IX. To learn from competent instructors committed to success of their students.

X. To meet face-to-face with business, industry, and organized labor.

2. **Assure that Public Higher Education responds to State Needs, particularly for Career and Technology Teacher Preparation**

Concern: Plans of the University of Maryland College Park to transfer offerings of the Department of Industrial, Occupational, and Technological Education to the Curriculum and Instruction Program Area, as well as to reduce graduate school options may diminish the availability and calibre of career and technology teachers in Maryland.

Presently, the department functions as almost the sole source of career and technology teachers in Maryland.

The Council recommends that the University review options of offering career and technology teacher preparation at other campuses prior to any action reducing present options. State needs and public commentary should be seriously considered in the

decision process. These steps apply not only to industrial, occupational, and technological education, but also potentially to decisions about terminating any other public higher education program meeting state needs.

Recommendations:

A) To the University of Maryland System:

In making decisions about program terminations for programs needed by the public, the University of Maryland System Campuses should

- **review State needs,**
- **provide opportunities for public commentary,**
- **consider the commentary as a serious factor in decision making, and**
- **coordinate plans with other State agencies.**

B) To the University of Maryland System:

Responsibility for exploring the option of moving programs among campuses should be

- **clearly designated,**
- **shared with those involved in making termination decisions, and**
- **pursued whenever termination of a program meeting a State need is formally considered.**

C) To the Maryland Higher Education Commission:

An inter-agency task force should be convened to determine how Maryland can best prepare and retrain career and technology teachers.

3. Strengthen Technology in Higher Education

Concern: Maryland higher education presents strengths as well as gaps in meeting the State's applied engineering technology employment needs.

The Maryland Higher Education Commission has provided leadership for identifying Maryland's engineering education needs. The Council would like to sustain and continue educational activities in support of engineering education.

Applied engineering technology is widely regarded as a key to improving State productivity.

Presently, Maryland public higher education provides programs to prepare engineers at the University of Maryland College Park, the University of Maryland Eastern Shore, and Morgan State University. Applied engineering is emphasized at the private Capitol

College. Associate degree programs in technologies directly related to industrial production are also available. However, the State lacks a well-respected, publicly accessible Bachelor of Technology program, for advanced applied engineering.

If students' education in technical areas is viewed as "terminal", our workplace technology will become terminal, as well. Maryland must close the gaps in its public education system if the State is to forge ahead and compete with a technically skilled workforce at all levels.

The highly specialized nature of the engineering field requires that experts in the field examine and more precisely define unmet curriculum and content needs, as well as viable options for meeting them.

Recommendation:

To help carry out recommendations of the Maryland Higher Education Commission Task Force on Engineering Education, the State Council on Vocational-Technical Education will form a task force composed of educational leaders who have specialized knowledge of advanced technical fields related to engineering to develop a proposal for linking existing educational opportunities and identifying needed curricula.

Participants should represent a cross-section of institutions with existing strengths in engineering, applied engineering, and engineering technology programs.

4. **Strengthen Faculty Professional Development for Technology Education**

Concern: Maryland presently lacks adequate staff development opportunities for the career and technology program and technology education teachers.

With the proposed new requirement of the State Board of Education that each graduating high school student have completed one credit of technology education, the State is poised on the verge of a major advance in technological literacy. To reach the promise of the new requirement, additional staff development for teachers will be needed.

In addition, the rapid pace of technological change in society requires that career and technology teachers remain abreast of new developments in their fields, as well as new developments in educational research.

Recommendations:

A) **To the Maryland Higher Education Commission:**

The Eisenhower Grants for professional development of teachers should be expanded to include technology education teachers.

The Eisenhower Grants provide professional development for math and science teachers and should be expanded to include technology education teachers.

B) **To the State Department of Education:**

The State Department of Education should expand its leadership role disseminating professional development materials, and should give extensive attention to working with local school systems to provide in-service training in readiness for the new technology education curriculum.

C) **To the State Department of Education:**

Certification requirements, particularly continuing education for teachers, should be re-examined to determine whether technical upgrading of existing teachers is recognized as a full component of teacher improvement.

5. <u>Improve Resources for Vocational-Technical Education</u>

Concern: Additional investment in career and technology education is needed to strengthen and expand programs, thereby helping strengthen the Maryland economy.

Although costs of career and technology programs are high due to needs for equipment and small class size, the programs are key to economic revival within the State. Funds spent on career and technology programs are returned, usually multiplied, to the State. Conversely, the State suffers if programs are not in place to provide the trained workforce the State needs to remain economically competitive.

Recommendations:

A) **To the State Department of Education:**

At the secondary level, endorse increasing the vocational-technical education set-aside of basic current expense aid to enable schools to achieve the Maryland School Performance Program Goals.

Anticipated enrollment increases in career and technology programs, as a result of the State Board of Education's decision to eliminate the "general track" of study point to the need to increase the set-aside.

Career and technology programs help improve attendance, an important goal of the Maryland School Performance Program. It is unlikely that the goal can be reached without additional investment in career and technology education.

The proposed technology education requirement will require additional funds if schools are to meet the challenges of the technology education curriculum in a serious way, and students are to become competitive in technology areas.

B) **To the Maryland Higher Education Commission:**

At the postsecondary level, the State should consider adding funds beyond the present formula as soon as possible to allow the community college programs to move forward.

Presently, community colleges enroll more than half of the students enrolled in public education. However, they receive only 15 percent of the State's higher education budget.

State funding could also be used as an incentive to four-year colleges to build upon the community college occupational programs with transfer opportunities, allowing students to continue to develop technical knowledge in areas relating to technologies present in the State and those we hope to attract.

6. Improve Services by Improving Inter-agency Communications

Concern: Greater information sharing among social and educational agencies serving the Maryland public is needed to strengthen services.

By sharing ideas, agency heads may learn of ways to strengthen their own programs, develop complementary services, and eliminate overlap and duplication.

Given the serious problems faced by a multitude of individuals within the State, a cooperative approach to providing services may yield improvements and a more holistic approach to the development of human potential.

Recommendation:

To All Social and Educational Service Agencies:

To learn more about each others' programs, heads of all Maryland social and educational service agencies should become more aware of areas of common as well as distinct aspects of each program, including program goals, needs of students and clients, and operational procedures.

Quarterly meetings of agency heads should be supplemented by regular exchange of information, including agency publications. Agency heads may also benefit by spending several days together observing and helping with each others' programs.

MARYLAND STATE COUNCIL ON
VOCATIONAL-TECHNICAL EDUCATION
MATRIX OF COUNCIL CONCERNS AND RECOMMENDATIONS

CONCERNS	RECOMMENDATIONS
1. Improve the Image of Vocational-Technical Education Career and technology students, schools and programs too often suffer "second class" status.	1A. The State Department of Education, as well as local school systems, must spearhead a high profile campaign to see that positive information about vocational-technical education opportunities is provided to the general public; and in particular, to middle school students, parents, and educators. (Implementation: State Department of Education and Local School Systems.)
	1B. The Students' Bill of Rights for Vocational-Technical Education Students set forth by the Vocational Industrial Clubs of America should be embraced as an unqualified standard for vocational-technical education programs, and should be endorsed and adopted by all agencies and organizations involved with planning and funding of career and technology education. (Implementation: State Department of Education, Maryland Higher Education Commission, the Workforce Investment Board, and Local School Systems.)
2. Assure that Public Higher Education responds to State Needs, particularly for Career and Technology Teacher Preparation Plans of the University of Maryland College Park to transfer offerings of the Department of Industrial, Occupational, and Technological Education to Curriculum and Instruction Program Area, as well as to reduce graduate school options may diminish the availability and calibre of career and technology teachers in Maryland.	2A. In making decisions about program terminations for programs needed by the public, the University of Maryland System Campuses should review State needs, provide opportunities for public commentary, consider the commentary as a serious factor in decision making, and coordinate plans with other State agencies. (Implementation: University of Maryland System.)

2B. Responsibility for exploring the option of moving programs among campuses should be clearly designated, shared with those involved in making termination decisions, and pursued whenever termination of a program meeting a State need is formally considered.

(Implementation: University of Maryland System.)

2C. An inter-agency task force should be convened to determine how Maryland can best prepare and retrain career and technology teachers.

(Implementation: Maryland Higher Education Commission.)

3. Strengthen Technology in Higher Education

Maryland higher education presents strengths as well as gaps in meeting the State's applied engineering technology employment needs.

3. To help carry out recommendations of the Maryland Higher Education Commission Task Force on Engineering Education, the State Council on Vocational-Technical Education should form a task force composed of educational leaders who have specialized knowledge of advanced technical fields related to engineering to develop a proposal for linking existing educational opportunities and identifying needed curricula.

(Implementation: State Council on Vocational-Technical Education.)

4. Strengthen Faculty Professional Development for Technology Education

Maryland presently lacks adequate staff development opportunities for the career and technology program and technology education teachers.

4A. The Eisenhower Grants for professional development of teachers should be expanded to include technology education teachers.

(Implementation: Maryland Higher Education Commission.)

4B. The State Department of Education should expand its leadership role disseminating professional development materials, and should give extensive attention to working with local school systems to provide in-service training in readiness for the new technology education curriculum.

(Implementation: State Department of Education.)

4C. Certification requirements, particularly continuing education for teachers, should be re-examined to determine whether technical upgrading of existing teachers is recognized as a full component of teacher improvement.

(Implementation: State Department of Education.)

5. Improve Resources for Vocational-Technical Education

Additional investment in career and technology education is needed to strengthen and expand programs, thereby helping strengthen the Maryland economy.

5A. At the secondary level, endorse increasing the vocational-technical education set-aside of basic current expense aid to enable schools to achieve the Maryland School Performance Program Goals.

(Implementation: State Department of Education.)

5B. At the postsecondary level, the State should consider adding funds beyond the present formula as soon as possible to allow the community college programs to move forward.

(Implementation: Maryland Higher Education Commission.)

6. Improve Services by Improving Inter-agency Communications

Greater information sharing among social and educational agencies serving the Maryland public is needed to strengthen services.

6. To learn more about each others' programs, heads of all Maryland social and educational service agencies should become more aware of areas of common as well a distinct aspects of each program, including program goals, needs of students and clients, and operational procedures.

(Implementation: All Social and Educational Service Agencies.)

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References

Bottoms, Gene & Presson, Alice. (1991). Most high school students are served scholastic junk food. Atlanta, GA: Southern Regional Education Board.

Carl D. Perkins Vocational and Applied Technology Act of 1990. (P.L.101-392).

Commission on the Skills of the American Workforce. (1990). America's choice: High skills or low wages! Rochester, NY: National Center on Education and the Economy.

Committee for Economic Development. (1985). Investing in our children: Business and the public schools. New York, NY: Author.

Gardner, David P., et al. (1983). A nation at risk: The imperative for educational reform. Washington, DC: National Commission on Excellence in Education.

Johnston, William B. & Packer, Arnold E. (1987). Workforce 2000: Work and workers for the twenty-first century. Indianapolis, IN: Hudson Institute.

Maryland State Department of Education. (1991). Maryland school performance program report, 1991. Baltimore, MD: Author.

National Commission on Children. (1991). Beyond rhetoric: A new American agenda for children and families. Washington, DC: Author.

Schaefer, Governor William Donald. 1992 State of the State Address.

United States Department of Education. (1986). Lagging behind. Washington, DC: Author.